Q. A ray of light incident at an angle θ on a refracting face of a prism emerges from the other face normally. If the angle of the prism is 5° and the prism is made of a material of refractive index 1.5, the angle of incidence is

(a) 7.5°   (b) 5°   (c) 15°   (d) 2.5°

Ans. (a) Since, deviation $\delta = (\mu - 1) A = (1.5 - 1) \times 5° = 2.5°$

By geometry, angle of refraction by first surface is 5°.

But $\delta = \theta - r$, so, we have, $2.5° = \theta - 5°$ on solving $\theta = 7.5°$.